FORM PTO-1390 (Modified) (REV 11-98) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER	U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR)
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INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/FR99/02425	11October1999 (11.10.99)	19October1998 (19.10.98)

TITLE OF INVENTION
COPY METHOD AVOIDING BIT-TO-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING SAME

APPLICANT(S) FOR DO/EO/US
Teddy Furon, Sylvain Chevreau and Eric Diehl

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ A copy of the International Search Report (PCT/ISA/210). Attached to Item 13
8. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☒ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 20 below concern document(s) or information included:

13. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98. with references attached
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☒ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☒ Certificate of Mailing by Express Mail 20. Return Postcard Receipt
20. ☒ ~~Other items or information:~~

CERTIFICATE OF MAILING UNDER 37 CFR 1.10

EL682442088US — **"Express Mail" mailing no.**

April 17, 2001 — **Date of Deposit**

I hereby certify that this application is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

DAVIDA FORNAROTTO — **Typed or printed name of person mailing application**

Davida Fornarotto — **Signature of person mailing application**

EXPRESS MAIL LABEL NO. EL682442088US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Teddy Furon, Sylvain Chevreau, Eric Diehl

Filed : Herewith

For : COPY METHOD AVOIDING BIT-TO-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING SAME

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

Sir:

In the US national phase application of PCT/US99/22759 filed herewith, please enter the following amendments:

IN THE SPECIFICATION:

Please amend the specification as follows: A marked up version of the amended specification is attached herewith:

Page 1,(which is the annex of the International Preliminary Examination Report), insert -- COPY METHOD AVOIDING BIT-TO-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING SAME --

Page 1, (which is the annex of the International Preliminary Examination Report), after the title, insert the following paragraph:

-- This application claims the benefit of French application serial no. 98/13074 filed October 19, 1998, and which claims the benefit under 35 U.S.C. § 365

of International Application PCT/FR99/02425, filed October 11, 1999, which was published in accordance with PCT Article 21(2) on April 27, 2000 in French.--

Page 2, after line 32, insert the following paragraph:

-- Preferably, the encryption key is moreover dependent upon a secret parameter which is contained in any reading device adapted for reading the digital data arising from said data source. --

Page 3, amend the paragraph beginning on line 17 as follows:

"The present invention also relates to a reading device allowing the implementation of the said methods of copying described hereinabove. According to this aspect of the invention, the device comprises a formatting circuit adapted for receiving the serial number of the medium onto which the digital data are to be copied and providing, as output, formatted data which are dependent on said serial number and are intended to be copied onto said medium.

The invention also relates, according to another aspect, to a recording medium for digital data comprising a serial number which is unique or exhibits a low probability of being common with that of another medium, characterized in that it furthermore comprises recorded digital data, said digital data being formatted as a function of said serial number and of a secret parameter."

IN THE CLAIMS:

Please amend the claims (which are the annexes to the International Preliminary Examination Report) as follows. A marked up version of the amended claims is attached herewith:

1. A method of copying which avoids the bit-by-bit duplication of digital data arising from a source of digital data on a medium, wherein said method comprises a step of formatting the digital data arising from said source of digital data as a function of a serial number contained in said medium and a step of writing said formatted data onto said medium.

2. The method as claimed in claim 1, wherein the serial number is recorded in an unfalsifiable manner on the medium during its manufacture.

3. The method as claimed in claim 1, wherein the serial number is a unique number for each medium or exhibits a low probability of being common to two media.

4. The method as claimed in claim 1, wherein the step of formatting of the digital data to be duplicated is carried out using a secret-key encryption algorithm such as DES or a public-key algorithm such as RSA.

5. The method as claimed in claim 4, wherein the encryption key is dependent on the serial number.

6. The method as claimed in claim 5, wherein the encryption key is furthermore dependent on a secret parameter contained in any reading device adapted for reading the digital data arising from said source.

7. A method of copying which avoids the bit-by-bit duplication of digital data read by a reading device and copied onto a medium , wherein the medium comprises a serial number and in that the method of copying comprises the following steps:

- sending of the serial number recorded on the medium to the reading device,
- formatting of the digital data read with the aid of the serial number, and
- recording on said medium of the formatted digital data.
-

8. The method as claimed in claim 7, wherein the formatting step is carried out in the reading device.

9. The method as claimed in claim 7, wherein the reading device comprises means making it possible to read the medium containing the formatted digital data.

10. The method as claimed in claim 7, wherein before performing the duplication of the digital data, it comprises a step of checking authorization to copy.

11. A reading device allowing the implementation of a method of copying according to claim 1, wherein it comprises a formatting circuit adapted for receiving the serial number of the medium onto which the digital data are to be copied and providing as output, formatted data which are dependent on said serial number and are intended to be copied onto said medium.

12. A recording medium for digital data comprising a serial number which is unique or exhibits a low probability of being common with that of another medium, wherein it furthermore comprises recorded digital data, said digital data being formatted as a function of said serial number and of a secret parameter.

IN THE ABSTRACT:

Please add the following Abstract.

-- The present invention relates to a method of copying which avoids the bit-by-bit duplication of digital data as well as to a reading device for implementing the method. According to this method, the medium onto which the digital data are to be duplicated comprises a serial number used to format the digital data read before writing them to said medium. The invention applies in particular to the duplication of DVDs, CDs, magnetic tapes or the like. --

REMARKS

The title has been amended to conform with the translated title of the published application (WO 00/23993).

The specification has been amended to include a reference to the priority applications and more clearly define the application.

The claims have been amended to remove reference indicia and to meet the United States requirements and more clearly define the application.

To meet the requirements of the United States, the Abstract (as originally filed in the PCT application) is added.

No fee is believed to have been incurred by virtue of this amendment. However if a fee is incurred on the basis of this amendment, please charge such fee against deposit account 07-0832

Respectfully submitted,
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David T. Shoneman
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THOMSON multimedia Licensing Inc.
Patent Operation
PO Box 5312
Princeton, NJ 08543-5312
April 17, 2001

MARKED UP VERSION OF THE AMENDED SPECIFICATION

Page 1,(which is the annex of the International Preliminary Examination Report), lines 1-3, delete "METHOD OF COPYING WHICH AVOIDS THE BIT-BY-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING THE METHOD" and insert -- COPY METHOD AVOIDING BIT-TO-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING SAME --

Page 1, (which is the annex of the International Preliminary Examination Report), after the title, insert the following paragraph:

-- This application claims the benefit of French application serial no. 98/13074 filed October 19, 1998, which is hereby incorporated herein by reference, and which claims the benefit under 35 U.S.C. § 365 of International Application PCT/FR99/02425, filed October 11, 1999, which was published in accordance with PCT Article 21(2) on April 27, 2000 in French.--

Page 2, after line 32, insert the following paragraph:

-- Preferably, the encryption key is moreover dependent upon a secret parameter which is contained in any reading device adapted for reading the digital data arising from said data source. –

Page 3, amend the paragraph beginning on line 17 as follows:

"The present invention also relates to a reading device [comprising a formatting circuit] allowing the implementation of the said methods of copying described hereinabove. According to this aspect of the invention, the device comprises a formatting circuit adapted for receiving the serial number of the medium onto which the digital data are to be copied and providing, as output, formatted data which are dependent on said serial number and are intended to be copied onto said medium.

The invention also relates, according to another aspect, to a recording medium for digital data comprising a serial number which is unique or exhibits a low probability of being common with that of another medium, characterized in that it furthermore comprises recorded digital data, said digital data being formatted as a function of said serial number and of a secret parameter."

MARKED UP VERSION OF THE AMENDED CLAIMS

1.(AMENDED) A method of copying which avoids the bit-by-bit duplication of digital data arising from a source of digital data [(1)] on a medium [(4), characterized in that] , wherein said method comprises a step of formatting the digital data arising from said source of digital data as a function of a serial number [(NS)] contained in said medium [(4)] and a step of writing said formatted data [(FD)] onto said medium.

2.(AMENDED) The method as claimed in claim 1, [characterized in that] wherein the serial number [(NS)] is recorded in an unfalsifiable manner on the medium [(4)] during its manufacture.

3.(AMENDED) The method as claimed in [one of claims 1 and 2, characterized in that] claim 1, wherein the serial number [(NS)] is a unique number for each medium or exhibits a low probability of being common to two media.

4.(AMENDED) The method as claimed in [any one of claims 1 to 3, characterized in that] claim 1, wherein the step of formatting of the digital data to be duplicated is carried out using a secret-key encryption algorithm such as DES or a public-key algorithm such as RSA.

5.(AMENDED) The method as claimed in claim 4, [characterized in that] wherein the encryption key is dependent on the serial number [(NS)].

6.(AMENDED) The method as claimed in claim 5, [characterized in that] wherein the encryption key is furthermore dependent on a secret parameter [(PS)] contained in any reading device [(2)] adapted for reading the digital data arising from said source.

7.(AMENDED) A method of copying which avoids the bit-by-bit duplication of digital data read by a reading device [(2)] and copied onto a medium [(4), characterized in that] , wherein the medium comprises a serial number [(NS)] and in that the method of copying comprises the following steps:

- sending of the serial number [(NS)] recorded on the medium [(4)] to the reading device [(2)],
- formatting of the digital data read with the aid of the serial number, and
- recording on said medium [(4)] of the formatted digital data.
-

8.(AMENDED) The method as claimed in claim 7, [characterized in that] wherein the formatting step is carried out in the reading device [(2)].

9.(AMENDED) The method as claimed in [any one of claims 7 or 8, characterized in that] claim 7, wherein the reading device [(2)] comprises means making it possible to read the medium containing the formatted digital data.

10.(AMENDED) The method as claimed in [any one of claims 7 to 9, characterized in that] claim 7, wherein before performing the duplication of the digital data, it comprises a step of checking authorization to copy.

11.(AMENDED) A reading device [(2)] allowing the implementation of a method of copying according to [one of claims 1 to 9, characterized in that] claim 1, wherein it comprises a formatting circuit [(3)] adapted for receiving the serial number [(NS)] of the medium onto which the digital data are to be copied and providing as output, formatted data [(FD)] which are dependent on said serial number [(NS)] and are intended to be copied onto said medium.

12.(NEWLY ADDED) A recording medium for digital data comprising a serial number which is unique or exhibits a low probability of being common with that of another medium, wherein it furthermore comprises recorded digital data, said digital data being formatted as a function of said serial number and of a secret parameter.

METHOD OF COPYING WHICH AVOIDS THE BIT-BY-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING THE METHOD

The present invention relates to a method of copying which avoids the bit-by-bit duplication of digital data arising from a first source on a medium. It also relates to a device used to implement this method.

Digital data exhibit the property of being able to be copied without appreciable loss of quality. Indeed, copying consists in transmitting a series of binary information, namely "1"s and "0"s from the source to the recorder device. The errors which customarily occur during copying are easily corrected by using well known error correction methods. Thus, when an information medium or a data source contains digital data, it is relatively simple to record them identically on a recordable medium.

To protect digital data against illicit copying, various methods are used.

Usually, the supplier furnishes the digital data medium such as the diskette in the case of software, with a mark preventing any copying.

In the document EP-A-0 773 490, there is proposed a system for protecting the information stored in recording media, in which system each medium comprises an identifier.

Another way of protecting digital data against copying consists in endowing them with a watermark or "tattoo", that is to say with auxiliary data tied to the digital data. The watermark must be non-modifiable and non-erasable. In this case, the reading of the data is done with the aid of a private key which identifies the watermark. Should there be any copying of the watermarked digital data, a private key is required to put the watermark back in place on the copy, without which the copy becomes illegal, being as it is devoid

of watermark. The digital data copied without watermark are no longer read by the reader since the latter does not identify the watermark where it ought to find one. Thus, the watermark precludes any copying without the private key.

These known methods of protecting copies are in general effective when the medium is processed by compliant reading or recording apparatuses. However, these methods do not avoid duplication by a pirate who creates a double or clone which is as similar as possible to the original by carrying out what is termed bit-by-bit copying.

The aim of the present invention is to propose a method of copying which avoids the unauthorized duplication of digital data arising from a first source on a medium, this method precluding bit-by-bit copying of the digital information.

The aim of the present invention is also to provide a reading device comprising circuits allowing the implementation of said method.

Accordingly, the subject of the present invention is a method of copying which avoids the bit-by-bit duplication of digital data arising from a source of digital data on a medium, characterized in that the medium comprises a serial number used to format the digital data arising from said source of digital data before writing them to said medium.

According to a preferred embodiment, the serial number is recorded in an unfalsifiable manner on the medium during its manufacture. For maximum avoidance of any pirating, the serial number is a unique number for each medium or exhibits a low probability of being common to two media.

Furthermore, the formatting of the digital data to be duplicated is carried out using a secret-key algorithm such as DES or a public-key algorithm such as RSA, the key being dependent on the serial number.

The present invention also relates to a method of copying which avoids the bit-by-bit duplication of digital data read by a reading device and copied onto a medium, characterized in that the medium comprises a serial number and in that the method of copying comprises the following steps:

- sending of the serial number recorded on the medium to the reading device,

- formatting of the digital data read with the aid of the serial number, and

- recording on said medium of the formatted digital data.

According to a preferred embodiment, the formatting step is carried out in the reading device. Said reading device furthermore comprises means making it possible to read the medium containing the formatted digital data.

According to a further characteristic of the method in accordance with the present invention, before performing the duplication of the digital data, the method comprises a step of checking authorization to copy.

The present invention also relates to a reading device comprising a formatting circuit allowing the implementation of said methods of copying described hereinabove.

Other characteristics and advantages of the present invention will become apparent on reading the description of a preferred embodiment given with reference to the herein-appended drawing in which:

Figure 1 is a diagrammatic view in block form of a reading device and of a recorder device allowing the copying of a first medium onto a second medium.

The present invention will be described whilst referring to the reading of digital data recorded on a digital medium such as a DVD standing for Digital Versatile Disc and copied onto a second virgin medium likewise consisting of a DVD which in this case must be recordable, namely a DVD-R. However, it is obvious to the person skilled in the art that other sources of digital information may be used, in particular digital information arising from a decoder and sent by a "broadcaster" or digital information stored on media such as a magnetic tape, a recordable or non-recordable optical disc, namely a CD, a CD-R, CD-RW, DVD, DVD-R, a

magneto-optical disc or the like. The recording medium consists of a recordable magnetic tape, a CD-R, a CD-RW, a DVD-R or a magneto-optical disc allowing storage of the audio and/or video information in digital form.

As represented in figure 1, the method of copying in accordance with the present invention makes it possible to copy the digital information D recorded on a DVD 1 by using a reading device 2 furnished with a formatting circuit 3 and the data FD which may be duplicated are recorded on a DVD-R 4 inserted into a recorder device 5.

In accordance with the present invention, the DVD-R 4 consisting of a virgin DVD-R comprises a serial number which is recorded in an unfalsifiable manner during the manufacture of the DVD-R. This serial number which is chosen in such a way as to be unique or to exhibit a very low probability of being present on two different media, is stored in a concealed area of the disc, such as the area entitled the "lead-in area", namely the track lead-in. As explained in greater detail hereinbelow, this serial number is used to format the digital data read from the original DVD 1.

In accordance with the method claimed in the present invention, the data read on the DVD 1 by the reading device 2 are sent to a formatting circuit 3 which carries out a formatting of the data by using the serial number read on the virgin DVD-R. Data FD formatted in a specific manner are thus obtained at the output of the reading device and are sent to the recorder device 5 where they are recorded on the DVD-R 4.

To carry out a formatting of the data such that the data recorded on the DVD-R cannot be copied bit-by-bit but can however be read back subsequently by the reading device, namely to make a so-called licit copy, various formatting processes may be used. One of the conventional formatting processes is a secret-key encryption algorithm such as DES standing for "Data Encryption Standard" which is well known to

specialists. To avoid any copying by a pirate, the key used in this case will be a key constructed with the aid of a secret key and of the serial number read on the virgin DVD-R. To carry out the formatting using this algorithm, the data recorded on the original DVD are chopped up into blocks of 64 bits then formatted by the DES using a 56-bit key obtained from the serial numbers. 64-bit formatted or enciphered data packets are obtained at the output and are recorded by way of the recorder apparatus 5 on the DVD-R 4. If the key consists of the serial number itself, the serial number will comprise 56 bits. However, the number of bits of the serial number is given by way of example. Indeed, it is possible to apply the invention to media whose serial numbers have lengths of greater than or less than 56 bits. In this case, a truncation or a channel coding can be applied so as to bring these serial numbers to the correct length. If the key is, for security reasons, a function of the serial number, it can be obtained as follows:

Given that NS is the serial number of the recording medium, and PS is the parameter stored in a secure manner in the compliant reading devices:

- NS and PS are concatenated so as to have a word (NS/PS),

- a hash function is applied such as the function SHA-1 (standard of the National Institute of Standards and Technologies) and this results in the word SHA (NS/PS) which has a length of 64 bits, and

- this word is truncated so as to have a 56-bit word which will serve as key for the DES.

The length of the binary words NS and PS is not fixed, since SHA-1 does not necessitate a precise length for the input word. The function f accommodates any length of serial number.

The DVD-R 4 thus copied licitly can be read by the reading device 2 and the original digital data are recovered using the corresponding decryption algorithm.

It is also possible to carry out the formatting of the digital data to be duplicated by using a public-key algorithm such as the RSA algorithm. This public-key algorithm is an asymmetric algorithm which, when the public key is known, precludes easy copying of the formatted data during their reading by the reading device 2.

Since the data located on the copy DVD-R do not have the same structure as the data of the original DVD, it is therefore not possible to recover them with a reading device other than a compliant reading device. Moreover, if a bit-by-bit copy of the original DVD has been made, the reading device of the present invention does not retrieve the original digital information and will not read the copy.

According to a further characteristic of the present invention, the method of copying can be preceded by a step of checking authorization to copy such as that described in French patent application No. 98 11860 filed on 23 September 1998 in the name of THOMSON multimedia and entitled "Protection contre la copie de données numériques stockées sur un support d'information" [Protection against the copying of digital data stored on an information medium]. This checking of authorization to copy is applied to an information medium comprising a first identification of a cipher of the digital data, a second identification of a watermark of digital data, a first determination of a first mark if it has been possible to identify the cipher and the watermark, a third identification of a type of the information medium, a second determination of a second mark if it has been possible to determine the first mark and if it has been possible to identify a determined type of information medium, a fourth identification of cryptographic signature data accompanying the digital data, a third determination of a third mark if it has been possible to determine the second mark and if it has been possible to identify a cryptographic signature datum and a first delivery of

permission for digital copying of the digital data if it has been possible to determine the third mark.

All of the characteristics described in this French patent application are incorporated into the present patent application for carrying out the checking of authorization to copy.

In accordance with the present invention, the device 2 for reading the digital data which may be a DVD reader, a decoder, a CD reader or the like, comprises a formatting circuit 3 consisting essentially of an integrated circuit including all the means required for carrying out the algorithm chosen for the formatting and making it possible to store in an unfalsifiable manner certain data such as a secret key or means for authorizing copying.

The embodiment described hereinabove is given by way of example and can be modified without departing from the framework of the claims herein-enclosed.

CLAIMS

1. A method of copying which avoids the bit-by-bit duplication of digital data arising from a source of digital data (1) on a medium (4), characterized in that said method comprises a step of formatting the digital data arising from said source of digital data as a function of a serial number (NS) contained in said medium (4) and a step of writing said formatted data (FD) onto said medium.

2. The method as claimed in claim 1, characterized in that the serial number (NS) is recorded in an unfalsifiable manner on the medium (4) during its manufacture.

3. The method as claimed in one of claims 1 and 2, characterized in that the serial number (NS) is a unique number for each medium or exhibits a low probability of being common to two media.

4. The method as claimed in any one of claims 1 to 3, characterized in that the step of formatting of the digital data to be duplicated is carried out using a secret-key encryption algorithm such as DES or a public-key algorithm such as RSA.

5. The method as claimed in claim 4, characterized in that the encryption key is dependent on the serial number (NS).

6. Method as claimed in claim 5, characterized in that the encryption key is furthermore dependent on a secret parameter (PS) contained in any reading device (2) adapted for reading the digital data arising from said source.

7. A method of copying which avoids the bit-by-bit duplication of digital data read by a reading device (2) and copied onto a medium (4), characterized in that the medium comprises a serial number (NS) and in that the method of copying comprises the following steps:

- sending of the serial number (NS) recorded on the medium (4) to the reading device (2),

- formatting of the digital data read with the aid of the serial number, and
- recording on said medium (4) of the formatted digital data.

8. The method as claimed in claim 7, characterized in that the formatting step is carried out in the reading device (2).

9. The method as claimed in any one of claims 7 or 8, characterized in that the reading device (2) comprises means making it possible to read the medium containing the formatted digital data.

10. The method as claimed in any one of claims 7 to 9, characterized in that before performing the duplication of the digital data, it comprises a step of checking authorization to copy.

11. A reading device (2) allowing the implementation of a method of copying according to one of claims 1 to 9, characterized in that it comprises a formatting circuit (3) adapted for receiving the serial number (NS) of the medium onto which the digital data are to be copied and providing as output, formatted data (FD) which are dependent on said serial number (NS) and are intended to be copied onto said medium.

ABSTRACT

The present invention relates to a method of copying which avoids the bit-by-bit duplication of digital data as well as to a reading device for implementing the method.

According to this method, the medium onto which the digital data are to be duplicated comprises a serial number used to format the digital data read before writing them to said medium.

The invention applies in particular to the duplication of DVDs, CDs, magnetic tapes or the like.

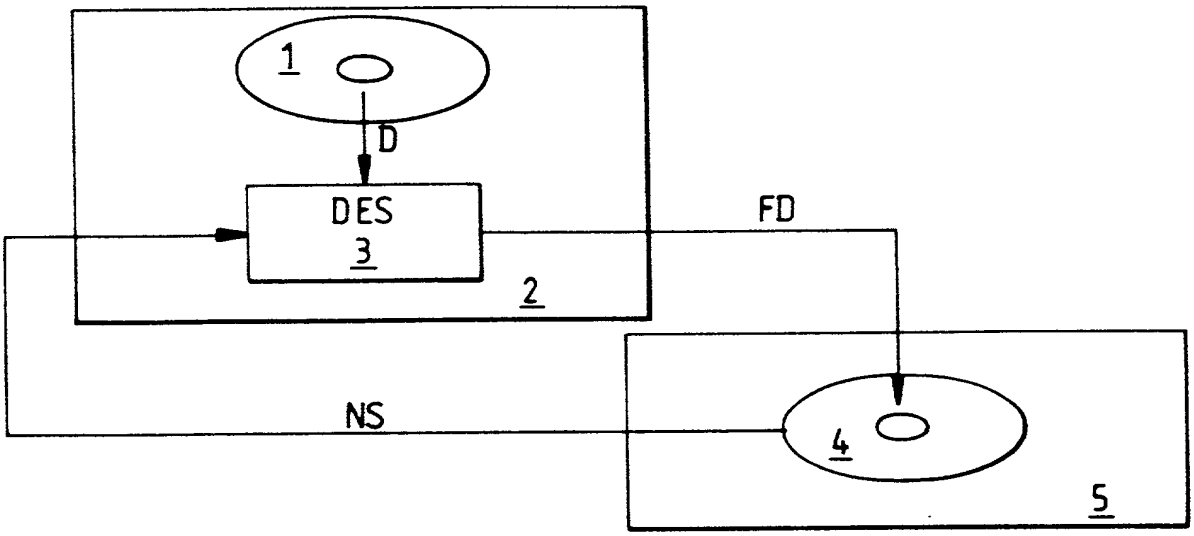

FIG.1

DECLARATION FOR UNITED STATES PATENT APPLICATION,
POWER OF ATTORNEY, DESIGNATION OF CORRESPONDENCE ADDRESS

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and that I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD OF COPYING WHICH AVOIDS THE BIT-BY-BIT DUPLICATION OF DIGITAL DATA AND READING DEVICE FOR IMPLEMENTING THE METHOD

the specification of which
(CHECK ONE) ( ) is attached hereto.
(XX) was filed on October 11, 1999, Application Serial. No. PCT/FR99/02425 and was amended on .

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 CFR 1.56(a).

I hereby claim foreign priority benefits under 35 USC 119 of any foreign application(s) for patent, utility model, design or inventor's certificate having a filing date before that of the application(s) on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Date Filed	Yes	No
9813074	FR	October 19, 1998	xx	

I hereby claim the benefit under 35 USC 120 of any US Application(s) listed below, and, insofar as the subject matter of each of the claims of this Application is not disclosed in the prior US application in the manner provided by the first paragraph of 35 USC 112, I acknowledge the duty to disclose information which is material to the examination of this application in accordance with 37 CFR 1.56(a).

Serial No.: Filed:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under of 18 USC 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

I hereby appoint the following attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Joseph S. Tripoli (Reg. No. 26,040), Dennis H. Irlbeck (Reg. No. 26,372), Eric Herrmann (Reg. No. 29,169) and Joseph J. Laks (Reg. No. ~~27,914)~~ Telephone: (609) 734-9813.

Address all correspondence to Joseph S. Tripoli, Patent Operations - Thomson multimedia Licensing, Inc. - CN 5312 - Princeton, New Jersey 08543-0028.

Signature: _____ Date: 15 day of March ,2001.
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F- 35000 Rennes
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Signature: _____ Date: 15 day of March ,2001.
Sole or First Joint Inventor: Eric Diehl
Citizenship: FR
Residence and Post Office Address: La Buzardière
F- 35340 Liffré
France

Signature: ______________________ Date: 15th day of March, 2001.

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